### 1 General economy with reference to the plastics industry

The mood in German board rooms has improved slightly, see <a href="www.ifo.de/ifo-geschaeftsklimaindex">www.ifo.de/ifo-geschaeftsklimaindex</a>. In September, the ifo business climate index rose from 94.3 to 94.6 points. This rise is due to a better assessment of the current situation. By contrast, the outlook for the months ahead is worsening again. The downturn is taking a break.

In the manufacturing sector, there is only one direction for the business climate: downwards. Companies are once again less satisfied with their current business; their expectations for the months ahead remain pessimistic. There are no signs of improvement to the development of current demand and production plans. In the construction industry, the business climate indicator actually rose. This is due to the more optimistic expectations of the building firms.

The good news is that the Federal Government is not expecting a marked recession. The Economics Ministry has stated this, see

www.bmwi.de/Redaktion/DE/Pressemitteilungen/Wirtschaftliche-Lage/2019/20191014-wirtschaftliche-lage-in-deutschland-im-oktober-2019.html. According to the Ministry, in spite of a long lull, there will not be a more pronounced downturn. Although the global economy is still having a negative effect on the German economy, it will be able to maintain the position it has achieved. It went on to say that growth among service providers and in construction will compensate for the ailing industry. On Thursday 17<sup>th</sup> October 2019, the Federal Government presented its new economic forecast. In the second quarter of the year, gross domestic product had fallen by 0.1 % in comparison to the previous quarter.

### 2 The primary plastics market - standard plastics

In September, the EUWID standard plastics price index had average quotes that were 26 €/t lower (1144 €/t) than in the previous month (1170 €/t), see Table 1. In a year-on-year comparison of the EUWID standard plastics price index, it can be seen that the average quotes from September 2019 (1144 €/t) were 205 €/t lower than those of the previous year (1349 €/t). The mood in the markets for standard plastics remains gloomy; experts are expecting plastic prices to continue to fall.

Whereas PE, PP and PVC have fallen by between 20 €/t and 80 €/t in price, PS is quoted 60 €/t higher. The price rise for PS is due to the price increase of the precursor produce by 49 €/t. Since September 2018, the price for packaging PET, then at 1480 €/t, has fallen continuously to the current 1120 €/t. And this means that within the period, packaging PET has fallen by a total of 360 €/t. In September 2019, packaging PET is quoted 25 €/t lower than in the previous month.

Table 1:	Standard plastics prices according to EUWID over the past five months, listed in €/	t.

Prices in €/t	September 2019	August 2019	July 2019	June 2019	May 2019
LDPE film grade	1010- 1080	1050- 1120	1050- 1120	1170- 1270	1170- 1270
LLDPE film grade	1020- 1110	1060- 1150	1060- 1150	1160- 1270	1160- 1270
HDPE injection moulding	1120- 1180	1180- 1240	1180- 1240	1260- 1320	1260- 1320
HDPE blow mould-ing	1140- 1200	1180- 1240	1180- 1240	1260- 1320	1260- 1320
PS crystal clear	1310- 1370	1250- 1310	1250- 1310	1340- 1400	1450- 1510
PS high impact	1410- 1470	1350- 1410	1350- 1410	1440- 1500	1550- 1610
PP homopolymer	1210- 1260	1290- 1340	1290- 1360	1370- 1440	1370- 1440
PP copolymer	1260- 1310	1340- 1390	1340- 1410	1420- 1490	1420- 1490
PVC tube grade	810- 860	830- 880	830- 880	860- 920	860- 920
PVC film/cables	850- 900	870- 920	870- 920	910- 960	910- 960
Average Price	1144 ± 191	1170 ± 182	1172 ± 184	1254 ± 199	1276 ± 222

#### 3 Secondary plastics markets in the plasticker price index

The plasticker internet platform, see <a href="http://plasticker.de">http://plasticker.de</a>, publishes quotes on an hourly basis. The present market report indicates the final monthly prices. It is only possible to represent the preliminary prices for the month of the report, in this case October 2019; they will not become definitive until early November. The two quotes stated for October 2019 below indicate only an interim situation, see the left-hand column in Table 2 and Table 3.

### 3.1 plasticker: Standard plastics

In September 2019 the average price for standard plastics is 513 €/t and thus 23 €/t lower than in the previous month (536 €/t), see. Table 2. The average price for September 2019 (513 €/t) was 22 €/t below that of the previous year (535 €/t). The following price changes were more than  $\pm$  40 €/t: HDPE regranulate -70 €/t, PP regranulate -50 €/t, PS regranulate +120 €/t and PVC\_U regrind -150 €/t. The September price index records subdued demand for plastic in comparison with the previous month.

In the September prices, LDPE regrind (480 €/t) equalled its lowest level from April 2017 (480 €/t). At 670 €/t LDPE regrind has reached its lowest quote for 5 years. Since September 2018 there has been a continuous fall for PET regrind, from 400 €/to 320 €/t in August 2019. In September, the quotes for PET regrind stabilised at 340 €/t.

Overall, standard plastics tended to more price falls in October. At 501 €/t, the preview of the October quotes shows an average price that is 12 €/t lower than in the previous month (513 €/t). The October price index, 11.10.2019, shows satisfactory demand for plastic to date.

	Oct. <sup>6</sup> 19	Sept. 19	Aug. 19	July 19	June 19	Sept. 18
HDPE regrind <sup>1</sup>	560	560	600	620	600	590
HDPE regranu- lates <sup>5</sup>	800	800	870	850	860	860
LDPE bale goods <sup>2</sup>	210	240*	240*	200	230	210
LDPE regrind <sup>1</sup>	540*	480	500	540*	520	580
LDPE regranu- lates <sup>5</sup>	690	670	680	700	700	780
PP bale goods <sup>3</sup>	130*	290*	370	240*	280*	140
PP regrind <sup>1</sup>	550	570	570	580	600	590
PP regranulates <sup>5</sup>	790	830	880	870	830	800
PS regrind⁴	660	610*	630	630	610	630
PS regranulates⁵	860	880	760	910	930	1130
PVC_P regrind <sup>1</sup>	340*	370*	350*	390*	300	330*
PVC_U regrind <sup>1</sup>	350	380*	530*	480*	430*	400*
PET bale goods	200*	160*	200	180*	200*	110*
PET regrind mixed colours	330	340	320	330	350	340
Average Price	(501)	513	536	537	530	535

Table 2: Standard plastics price according to plasticker; listed in €/t.

<sup>\*:</sup> Supply figure too low to attain statistical significance; ¹: equivalent to the grade "post-industrial mixed colours"; ²: equivalent to K49; ³: equivalent to K59; ⁴: equivalent to "standard, mixed colours"; ⁵: equivalent to the grade "regranulates, black"; ⁶: preview (may be amended by additional quotes)

#### 3.2 plasticker: Technical plastics

The September price index is showing subdued demand for plastic. A comparison of the average prices from September 2019 (1249 €/t) with those of the previous year (1245€/t) shows a current price that has hardly changed. In September 2019 the average price for technical plastics in plasticker is 1249 €/t and thus almost unchanged in comparison to the previous month (1252 €/t), see. Table 3. However, there were very clear changes for some individual plastics. The following price changes were more than  $\pm$  70 €/t: ABS regranulate +110 €/t, PC regranulate -380 €/t, PBT regranulate -140 €/t, PA 6.6 regranulate -80 €/t and POM regranulate +190 €/t. The last time ABS regranulate was quoted lower, was November 2017, when it was 590 €/t. PC regranulate has reached a 5-year low. The last time PBT regranulate was quoted lower, was December 2017, when it was 1560 €/t.

At 1137 €/t, the preview of the October quotes shows an average price that is as much as 116 €/t lower than in the previous month (1225 €/t). The October price index shows a slightly increased demand for plastic in comparison to the previous month. The price of POM regranulate seems to have fallen markedly in October.

	Oct. <sup>6</sup> 19	Sept. 19	Aug. 19	July 19	June 19	Sept. 18
ABS regrind	610	610	660	670	690	640
ABS regranu- lates <sup>5</sup>	1080	1230	1120	1070	1150	1380
PC regrind	980	940	930	930	880	930
PC regranulates <sup>5</sup>	1590	1640	2020	1890	1880	2010
PBT regrind	460	510	540	500	490	480
PBT regranulates	1590	1570	1710	1820	1710	1700
PA 6 regrind	830	810	790	810	830	840
PA 6 regranu- lates <sup>5</sup>	1710	1760	1760	1820	1990	1780
PA 6.6 regrind	870	870	860	870	850	910
PA 6.6 regranu- lates <sup>5</sup>	1950	2120	2200	2270	2260	1950
POM regrind	580	590	580	590	600*	640
POM regranu- lates <sup>5</sup>	1390	2050	1860	1780	1740	1680
Avorago Prico	(1137)	1225	1252	1252	1256	1245

Table 3: Technical plastics price according to plasticker; listed in €/t.

#### 4 Evaluation of the secondary plastic markets

#### 4.1 Standard plastics

In September 2019, a comparison of the data for standard plastics from EUWID with plasticker shows that EUWID showed price stability with low demand, whereas plasticker was quoting marked price falls with modest demand. In plasticker there is even a trend towards further falling prices, especially for regranulates. EUWID, which only quotes bale goods and regrinds, shows price stability, both from post-industrial and post-user waste.

In EUWID the PE post-industrial waste for mixed-colour HDPE regrind is quoted at 480 €/t and mixed-colour LDPE regrind at 465 €/t. Film mixed colours costs 100 €/t and film natural 395 €/t. PP post-industrial waste is quotes at 480 €/t for mixed colour regrind homopolymer and 625 €/t for natural regrind homopolymer. PVC post-industrial waste for plasticised transparent are quoted at 320 €/t and unplasticised transparent at 540 €/t.

<sup>5:</sup> equivalent to the grade "regranulates, black"; 6: preview (may be amended by additional quotes)

There are only minor changes for PE post-user quotes, especially for film. Commercial mixed film (90/10) is quoted by an average 8 €/t higher and was thus at 80 €/t in September. Commercial mixed film (80/20) is quoted at 10 €/t higher and is thus at 38 €/t. As much as 520 €/t can be achieved for HDPE regrinds from crates.

Only very small amounts of plastic waste are still exported. And this applies equally to exports from Germany to European markets, Turkey or the Far East. Or, to put it another way, there are increasing signs that German markets are flooded. Warehouses are full; even the temporary storage facilities are well filled. Individual disposal companies are already refusing to accept certain plastic wastes. The flow of plastics from collections to recovery is stagnating. Only the best waste finds its way to recycling. The opportunities to accommodate plastics in waste incineration plants or alternative fuel combined heat and power plants.

### 4.2 PET Recycling

PET recycling is coming under pressure. Although further falling bottle prices are pleasing, the price falls for virgin grade are also impacting the recyclates. Moreover, the costs for removing residues and alien material accumulated during processing are constant.

Although the supply of used beverage bottles is falling, it is still sufficiently high in the autumn. The September quotes for used PET returnable bottles were 13 €/t lower in comparison to the previous month, for PET mixed 15 €/t lower and unchanged for PET coloured.

#### 5 Explanation on the price quotes

A detailed discussion with information of price indices for virgin grades and waste plastics as well as precursor products can be found in EUWID Recycling and Disposal see <a href="https://www.euwid.de">www.euwid.de</a>, or in EUWID Plastics <a href="https://www.euwid-kunststoff.de">www.euwid-kunststoff.de</a>. EUWID: No guarantee for any of the prices.; prices ex station. As a rule, the prices quoted refer to quantities in excess of 20 tons.

The quotes for secondary prices, which are updated on an hourly basis, can be calculated using the price lists that are derived from the quotations published in the raw material exchange plasticker, see <a href="www.plasticker.de">www.plasticker.de</a>. The prices listed in this index are quoted without reservation - as the majority of the quotes submitted are not necessarily equivalent to the sales prices. Plasticker offers the quality grades regrind and regranulates both as virgin materials and as secondary goods. The term 'bale goods' refers to waste plastics only. Furthermore, plasticker does not distinguish between the following grades: transparent, mixed colours or colour-separated. Therefore, the information provided by plasticker may indicate different market behaviour than the prices quoted by EUWID

Bonn, Friday, 25. October 2019

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